Skeleton System

Bone

Function Of Bone

- Support, Protection & Movement
  - Gives Shape To The Body
  - Supports Body Weight
- Blood Cell Formation — The Red Bone Marrow Found In The Connective Tissue Of Certain Bones Is The Site Of Blood Cell Production
- In-organic Salt Storage — Storage Depot For Many Of The Body Needs
  - Calcium
  - Potassium
  - etc...

Classification Of Bone

Position

1. Axial Skeleton
   - Bones Of Skull
   - Thoracic Cage
   - Vertebral Column
2. Appendicular Skeleton
   - Bones Of The Limbs
   - Girdles Of Limbs

Shape

1. Long Bones — Humerus, Femur, Etc.
2. Short Bones — Carpal And Tarsal Bones
3. Flat Bones — Scapula, Ribs, Sternum Etc.
4. Irregular Bones
   - Vertebrae
   - Hip Bone
   - Bones In The Base Of Skull
5. Pneumatic Bones — Sphenoid, Ethmoid, Maxila, Etc.
6. Sesamoid Bones — Patella, Pisiform,fabella Etc.

Structure

Macroscopic

1. Compact Bone — In The Cortex Of Long Bones
2. Spongy Bone "Cancellous" — In The Inner Part Of Long Bones

Microscopic

1. Fibrous Bone
   - These Have More Fibers In Them — Also Known As Immature Bones
   - Example — Found Only In Fetus, Sockets Of Alveolar Bones And Sutures Of The Skull
2. Lamellar Bone
   - Most Of The Mature Human Bones, Whether Compact Or Cancellous — Are Composed Of Thin Plates Of Bony Tissue Called Lamellae
   - Example — Formed On The Periosteal Surface Of Diaphysis
3. Woven Bone
   - Occurs Initially In Fetal Bones — In Adults Woven Bone Is Created After Fractures
   - Example — Seen In Fetal Bone, Fracture Repair And In Cancer Of Bone
4. Dentine And Cement
   - Cementum — Is A Specialized Calcified Substance Covering The Root Of A Tooth — It Hardens To Act As An Adhesive Glue
   - Dentine — Is One Of The Hard Tissues Of The Teeth — Which Constitutes Most Of Its Bulk.
   - Example — Occur In Teeth

Development

1. Membranous Bones
   - These Bones Ossify In Membrane From Mesenchymal Condensations
   - Example — Bones Of The Vault Of Skull And Facial Bones
2. Cartilaginous Bones
   - They Ossify In Cartilage And Thus Derived From Performed Cartilaginous Models
   - Example — Thoracic Cage, Etc.
3. Membro-cartilaginous Bones
   - They Ossify Partly In Membrane And Partly In Cartilage
   - Example — Clavicle, Mandible, Temporal, Etc

Cartilage

Is A Connective Tissue Composed Of Cells & Fibers Embedded In Nucleopolysachharide

Types

1. Hyaline Cartilage — Covers The Atricular Surface Of Synovial Membrane
2. Fibro-cartilage — Present In The Epiglottis Etc.
3. Elastic Cartilage — Present In The Ear Pinna

Joint

The Point In Human Skeleton Where Two Bones Join Together Is Called A Joint

Types

1. Synarthroses
   - Immoveable Joints
   - Example — Suture
2. Amphiarthrosis
   - Slightly/partially Moveable Joints
   - Example — Intervertebral Disc
3. Diarthrosis
   - Freely Moveable Joints
   - Example — Synovial Membrane

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